

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001502**Date Inspected:** 11-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Xu Le Feng, Ye Yong Jun, Sha Zi Cui, Wu Jie			<b>CWI Presenting</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** Tower Mock-ups and OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**Bay 1**

The Quality Assurance Inspector observed ZPMC squaring the length of closed ribs on the milling machine. Eight ribs were stacked and being milled simultaneously. The Quality Assurance Inspector measured the ribs to be approximately five meters in length, 12 millimeters in thickness and 790 millimeters in width. The Quality Assurance Inspector observed ZPMC drilling bolt holes in the closed ribs. ZPMC was observed beveling closed ribs in preparation for the partial joint penetration connection to the deck plate. ZPMC Quality Control would measure the bevel angle and record the values on the closed rib. The general appearance of the bevel appeared to be rough and contain sharp edges. After beveling, ZPMC was observed bending the closed ribs and performing dimensional inspections.

The Quality Assurance Inspector observed ZPMC welding operator Han Cheng Hai, welder identification number, 1059464, performing in process welding of deck plate butt weld 004-001-007. Quality Control Inspector Xu Le Fang was monitoring the welder. The welder was using the submerged arc welding process to produce the complete joint penetration weld in the flat position. The part was stationary while the welding machine was on tracks to facilitate welding along the length of the part. The Quality Assurance Inspector witnessed Quality Control measure the welding parameters at Mr. Han's station and found the parameters to meet the minimum requirements of welding procedure specification WPS-B-T-2221-B-L2C-S-1. After welding the first side, the

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Quality Assurance Inspector observed ZPMC turn the part over and perform back gouging utilizing the air carbon arc process and grinder.

### Bay 2

The

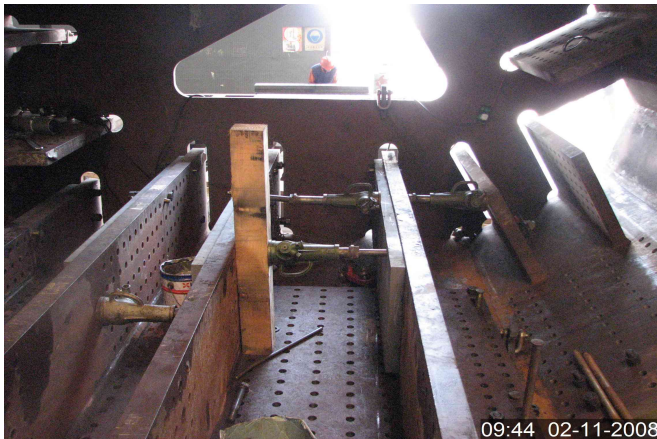
Quality Assurance Inspector observed ZPMC performing fit-up operations of an internal bolted connection at skin plate A. Below is a digital photograph illustrating the fit-up in progress. An Incident Report was generated pertaining to American Bridge/ Flour having allowed ZPMC to utilize the use of five 10 ton hydraulic jacks to aid in the fit-up of several interior bolted stiffener plates. The use of hydraulic jacks is not in the ZPMC fabrication procedure.

### Bay 3

The Quality Assurance Inspector observed ZPMC performing heat straightening operations to side plate SP075 in accordance with heat straightening request HSR-B-035.

### Bay 7 and 8

The Quality Assurance Inspector observed no ZPMC personnel working in bays 7, and 8.



### Summary of Conversations:

As stated in the contents of the above report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Bertlesman,Greg	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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